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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/652,486

09/02/2003

Yuji Sano

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STAAS & HALSEY LLP

SUITE 700

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EXAMINER

LUI, DONNA V

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/652,486	Applicant(s) SANO ET AL.	
	Examiner Donna V. Lui	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/02/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 31-37 in the reply filed on March 23, 2003 is acknowledged.
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 31-37** are rejected under 35 U.S.C. 102(e) as being anticipated by Ide et al. (Pub. No.: 2003/0085886 A1).

With respect to **Claim 31**, Ide discloses a plasma display panel (*Figure 7, element 10*) having at least a pair of electrodes making up a capacitive load (*Figure 7: $C(i,j)$*) and causing discharge to occur between the pair of electrodes (*Figure 7: pair of electrodes $\sim Y_n$ and X_n ; [0064], lines 9-11*). Ide teaches a capacitive load drive circuit (*See figure 10; [0107], lines 1-4*) connected to at least either electrode of the pair of electrodes and driving the capacitive load ($C0$), wherein the capacitive load drive circuit has a coil circuit ($L1$) connected between an output terminal ($L3$) to be connected to the one of electrodes and a reference potential (V_s) and controls so that when the energy stored in the capacitive load is discharged, the energy is stored in the coil circuit (*[0122]; Energy is stored in the coil since work is required to establish current flow through the inductor, as indicative of a resonance circuit*) and at the same time the energy is retained in the coil circuit while the current flowing through the coil circuit is increasing (*[0116], lines 3-7*), and when the capacitive load is recharged, the stored energy is released while the current flowing through the coil circuit is decreasing (*[0116], lines 7-9; the stored energy is released when the current through the inductor decreases as indicative of a resonance circuit*).

With respect to **Claim 32**, Ide teaches a switch circuit (*Figure 10, elements $S6$ and $D2$; [0122], lines 1-4*) maintaining the discharged state of the capacitive load after the capacitive load is discharged and until it is recharged, and a power supply switch circuit (*Figure 10, $S5$ and $D1$; [0116], lines 1-3*) maintaining the charged state of the capacitive load after the capacitive load is charged and until it is discharged again.

With respect to **Claim 33**, Ide teaches the switch circuit is composed of a one-way conductive element (*Figure 10, element D2: diode; [0109], line 5*).

With respect to **Claim 34**, Ide teaches the power supply switch circuit is controlled so as to be brought into a conductive state before the charging of the capacitive load is completed (*See figure 10, D2: diode; [0109], line 4; [0116]; since a diode is a one-way conductive element then the diode must be brought into the conductive state before current can flow through, thus conductivity is prior to the completed charging of the capacitive load*).

With respect to **Claim 35**, Ide teaches the energy is stored in the coil circuit via the one of the electrodes when the energy stored in the capacitive load is discharged and the released energy is supplied to the capacitive load via the one of the electrodes when the capacitive load is recharged (*[0116]; [0122]; energy is stored in an inductor when current flow through an inductor is increasing, when the current through an inductor is decreasing the stored energy is released, as indicative of a resonance circuit*).

With respect to **Claim 36**, Ide teaches the capacitive load drive circuit (*[0068], pulse generating circuit ~ capacitive load drive circuit*) is connected between the one of electrodes and the other of the pair of electrodes (*[0064], lines 9-11; [0068]; note that capacitive load drive circuit in Figure 10 is the same for all electrodes X, Y, and Z*), stores the energy in the coil circuit via the one of electrodes when the energy stored in the

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capacitive load is discharged, and supplies the released energy to the capacitive load via the other electrode when the capacitive load is recharged ([0116]; [0122]; *energy is stored in an inductor when current flow through an inductor is increasing, when the current through an inductor is decreasing the stored energy is released, as indicative of a resonance circuit; note that the energy is stored and supplied from the coil circuit of all the capacitive load drive circuits for the electrodes X, Y, and Z and that the driving is simultaneous for all electrodes since the timing of the switches occurs during the same time period as seen from figure 11; further note that all electrodes have coil circuits that store energy and supplies energy of the capacitive load simultaneously*).

With respect to **Claim 37**, Ide teaches a plasma display apparatus (*See figure 7*) comprising: a plasma display panel (*figure 7, element 10*) having a plurality of scan electrodes (*figure 7, Y1- Yn*) and a plurality of address electrodes (*figure 7, Z1- Zm*) arranged so as to intersect the scan electrodes; a scan electrode drive circuit (*figure 7, element 31*) driving the plurality of scan electrodes; and an address electrode drive circuit (*figure 7, element 21*) driving the plurality of address electrodes, wherein the address electrode drive circuit (*figure 10; [0068]*) has a coil circuit (*L1*) connected between an output terminal ([0107], *lines 1-4*) to be connected to the address electrode and a reference potential (*figure 10, Vs: reference potential*) and controls so that when the energy stored in the capacitive load consisting of the address electrodes and the scan electrodes is discharged, the energy is stored in the coil circuit ([0122]; *Energy is stored in the coil since work is required to establish current flow through the inductor, as indicative of a resonance circuit*) and at the same time the energy is retained in the coil

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circuit while the current flowing through the coil circuit is increasing ([0116], lines 3-7), and when the capacitive load is recharged, the stored energy is released while the current flowing through the coil circuit is decreasing ([0116], lines 7-9; *the stored energy is released when the current through the inductor decreases as is known in the art*).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ide (Patent No.: 6,333,738 B1) is cited to teach a capacitive load drive circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna V. Lui whose telephone number is (571) 272-4920. The examiner can normally be reached on Monday through Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571)272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donna V Lui
Examiner
Art Unit 2629

AMR A. AWAD
PRIMARY EXAMINER
